

Application No. 09/901,487
Amendment dated May 11, 2006
After Final Office Action of January 11, 2006

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Docket No.: 02598/000J593-US0

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) An image sensor module, comprising:

 a PCB for transferring and transmitting electric signals and having a circuit, the PCB having an opening at a predetermined portion therethrough;

 an image chip seated in the opening;

 a transparent medium having a printed circuit of a predetermined pattern on a first surface thereof;

 a first bump and a second bump formed on the first surface of the transparent medium, the first bump being electrically connected to a chip pattern of the image chip seated-on in the PCB, the second bump being electrically connected to the circuit of the PCB and situated between the PCB and the printed circuit of the transparent medium.; and

 epoxy resin molded to the predetermined portion of a rear surface of the PCB, on in which the image chip is mounted.

2. (Original) The image sensor module of claim 1, wherein the predetermined transparent medium is either glass or an IR filter.

3. (Cancelled)

4. (Original) The image sensor module of claim 1, wherein the bumps are composed of a medium having high conductivity such as gold or lead.

5. (Original) The image sensor module of claim 1, wherein the bonding is performed by means of ultrasonic wave or heat.

6. (Withdrawn) A method for fabricating an image sensor module, comprising the steps of:

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forming a printed circuit of a predetermined pattern on an upper surface of a transparent medium;

forming a first bump and a second bump on the upper surface of the transparent medium;

first bonding the first bump with a pattern of an image chip so as to be electrically connected to each other;

secondly bonding the second bump with a circuit of a PCB so as to be electrically connected to each other; and

molding a rear surface of the PCB, on which an image chip is mounted, by means of epoxy resin.

7. (Withdrawn) The method of claim 6, wherein the predetermined transparent medium is either glass or an IR filter.

8. (Withdrawn) The method of claim 6, wherein the first bonding step is performed by seating the image chip in the space of the flexible PCB cut at a size equivalent thereto so that a pattern of the image chip can be matchably bonded with the first bump, and that the transparent medium can be disposed therebetween.

9. (Withdrawn) The method of claim 6, wherein the bumps are composed of a medium of high conductivity such as gold or lead.

10. (Withdrawn) The method of claim 6, wherein the bonding is performed by means of ultrasonic wave or heat.

11. (Withdrawn) An image sensor module in accordance with claim 1, further comprising:

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a molded material filled up with the epoxy resin to a glass surface between the first bump and the second bump for maintaining air-tightness.

12. (Withdrawn) The image sensor module of claim 11, wherein the predetermined transparent medium is either glass or an IR filter.

13. (Withdrawn) The image sensor module of claim 11, wherein the image chip is seated on a hollow area formed in a predetermined portion of the PCB so that a pattern of an image chip can be matchably bonded with the first bump, and that the transparent medium can be disposed therebetween.

14. (Withdrawn) The image sensor module of claim 11, wherein the bumps are composed of a medium having high conductivity such as gold or lead.

15. (Withdrawn) The image sensor module of claim 11, wherein the bonding is performed by means of ultrasonic wave or heat.

16-20. (Canceled).

21. (Previously Presented) An image sensor module in accordance with claim 1, wherein the PCB is a flexible PCB.

22. (Withdrawn) An image sensor module in accordance with claim 1, wherein the PCB is a hard PCB.

23. (Withdrawn) An image sensor module in accordance with claim 11, wherein the PCB is a hard PCB.

24. (Withdrawn) The method of claim 6, wherein the PCB is a flexible PCB.

25. (Withdrawn) The method of claim 6, wherein the PCB is a hard PCB

26. (New) An image sensor module, comprising:

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a PCB for transferring and transmitting electric signals and having a circuit, the PCB having an opening at a predetermined portion therethrough;
an image chip seated in the opening;
a transparent medium having a printed circuit of a predetermined pattern on a first surface thereof; and
a first bump and a second bump formed on the first surface of the transparent medium, the first bump being electrically connected to a chip pattern of the image chip seated in the PCB, the second bump being electrically connected to the circuit of the PCB and situated between the PCB and the printed circuit of the transparent medium.

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